

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS**

TOWN OF WESTPORT,

Plaintiff,

vs.

MONSANTO COMPANY, SOLUTIA INC.,
and PHARMACIA LLC,

Defendants.

Case No. 14-CV-12041

**PLAINTIFF’S MEMORANDUM IN OPPOSITION TO DEFENDANTS’ MOTION TO
EXCLUDE THE EXPERT OPINIONS OF ROBERT HERRICK**

SUMMARY

In this action for property damage based on theories of negligence and breach of implied warranty, Plaintiff Town of Westport (Westport) seeks compensation for the reasonable costs of investigating and remediating Polychlorinated Biphenyl (PCB) contamination at Westport Middle School. Westport has designated Robert Herrick—a Certified Industrial Hygienist who teaches at the Harvard School of Public Health and who has studied PCB contamination in buildings where caulk and other building materials contain PCBs—to testify about whether Westport acted reasonably by removing the PCB sources and contamination at the school. Monsanto argues (1) that Dr. Herrick is unqualified to offer this opinion because he does not claim to be an expert in environmental remediation; (2) that Dr. Herrick’s testimony will not assist the jury because he did not use the magic words “reasonably necessary”; and (3) that Dr. Herrick lacks a reliable basis to opine that the PCB contamination at Westport Elementary School represents a health hazard that Westport needed to remediate.

Dr. Herrick’s education, training, and decades of experience practicing and researching in the field of industrial hygiene amply qualify him to offer his opinions here. Dr. Herrick’s opinions meet the relevance requirement of Rule 702 because they will help the jury decide whether remediation was reasonably necessary—Massachusetts law does not require experts to use “magic words” to express their opinions on a matter at issue, nor does it require that property damage claimants prove that contamination occurred at a level that causes human health effects in order to hold someone liable for remediation costs. Finally, Dr. Herrick’s opinions arise directly from his published, peer-reviewed scientific research, follow the standard methods of industrial hygiene, and rest on the same type of evidence other industrial hygienists use to identify and control exposures that represent a health threat. Dr. Herrick’s opinions therefore satisfy the requirements of Federal Rule of Evidence 702 and should be admitted.

I. FACTS

A. Background

In 2011, Westport filed this suit against Defendants Monsanto Company, Solutia, Inc., and Pharmacia Corporation (collectively “Monsanto”), successors to the sole manufacturer of PCBs in the United States from the 1920s until the 1970s, asserting causes of action for negligence and breach of implied warranty (on theories of defective design and failure to warn). Dkt. 119 (First Am. Compl.). Westport seeks to recover damages caused by the contamination of Westport Middle School, including the costs of investigating, sampling, testing, remediation, and removal of PCBs and PCB-containing materials. Under Massachusetts law, proof of the damages Westport seeks will require a showing both that the remediation was “reasonably necessary,” and that the costs of remediation were “reasonable.”¹

¹ See *Trinity Church v. John Hancock Mut. Life Ins. Co.*, 502 N.E.2d 532, 536 (Mass. 1987).

B. Dr. Herrick's Qualifications

Dr. Robert Herrick is a Certified Industrial Hygienist who has spent decades assessing and studying the occupational and environmental health hazards created by toxic exposures, and who currently teaches others to do so as a Senior Lecturer in Industrial Hygiene in the Department of Environmental Health at The Harvard University School of Public Health. Dr. Herrick holds a B.A. in Chemistry from the College of Wooster (1970), an M.S. in Environmental Health Science from the University of Michigan (1972), and a Doctor of Science degree in Environmental Health Science (Industrial Hygiene) from the Harvard School of Public Health (1987). **Exhibit A** at 1 (Curriculum Vitae of Robert F. Herrick). He has been board certified in the comprehensive practice of industrial hygiene by the American Board of Industrial Hygiene for 36 years, and has been recognized for his achievement in the field of industrial hygiene as a fellow of the American Industrial Hygiene Association since 1997. *Id.* at 1-2.

Dr. Herrick has spent twenty-two years conducting investigations and research on occupational environmental health topics, including seventeen years as an industrial hygienist for the National Institute for Occupational Safety and Health (NIOSH). **Exhibit B** at 2 (Expert Report of Robert F. Herrick). At NIOSH, Dr. Herrick supervised the work of other industrial hygienists and researchers in the Division of Surveillance, Hazard Evaluations and Field Studies (DSHEFS), first as Chief of the Industrial Hygiene Section in the Industrywide Studies Branch, next as Assistant Chief of the Industrywide Studies Branch, then as Associate Director for Science in the Office of the Director of DSHEFS, and finally as Acting Deputy Director of DSHEFS. *Id.*; Ex. A at 5.

Dr. Herrick is a past President of the International Occupational Hygiene Association and past National Chair of the American Conference of Governmental Industrial Hygienists. He has

served on and chaired committees of the National Academy of Sciences, the International Agency for Research on Cancer, the United States Environmental Protection Agency (EPA), and NIOSH. Ex. A at 2-3.

Dr. Herrick has written or co-authored over 100 peer reviewed publications in the field of environmental health sciences, including the first survey of PCB-containing building materials in United States' schools and other structures. Ex. B at 2. His publications include a peer-reviewed study on PCBs in buildings that demonstrated that PCBs could be leached from exterior caulking material and contaminate the soil around buildings. *Id.* Dr. Herrick investigated and published a study of PCB levels in the blood of construction workers who installed and removed PCB caulk from buildings. *Id.* And, of particular significance here, he has also published recent research demonstrating that teachers in PCB-containing schools suffer from elevated levels of PCB in their blood. *Id.*

C. Dr. Herrick's Opinions

Westport has designated Dr. Herrick to testify about whether Westport acted reasonably by removing the PCB sources and contamination at Westport Middle School. Dr. Herrick will testify that Westport "was reasonable in its decision to take actions to remove or otherwise remediate PCB contamination at Westport Middle School in order to provide maximum protection for those inside the school building with the expectation that under no circumstance would exposure to children of air levels above 300 ng/m³ be permissible." Ex. B at 3. Further, he will testify that Westport was "entirely reasonable in deciding to remove or otherwise remediate sources of PCB contamination from Westport Middle School" because "PCBs in schools pose a health threat to those inside, particularly to children," and "PCBs are wide-spread contaminants, and removal and proper disposal of PCB-containing materials prevents further environmental

contamination, reducing the public health threat of PCB exposure.” *Id.* To support these opinions, Dr. Herrick relies not only on his opinions about the hazards of exposure to PCBs, but also on the results of testing for PCB contamination at Westport Middle School, and the regulatory guidelines that have been promulgated for PCB exposures in schools. *Id.* at 3, 17. Dr. Herrick sets forth the basis for these opinions in his 19-page report, attached as Exhibit B.

II. LEGAL STANDARD

Federal Rule of Evidence 702 provides that a witness “who is qualified as an expert by knowledge, skill, experience, training, or education” may offer opinion evidence if “the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue,” and the testimony is “based on sufficient facts or data,” and is “the product of reliable principles and methods,” that the expert has “reliably applied to the facts of the case.”

Under Rule 702, the district court serves as the gatekeeper for expert testimony by “ensuring that [it] ... both rests on a reliable foundation and is relevant to the task at hand.”² “This does not mean that trial courts are empowered ‘to determine which of several competing scientific theories has the best provenance.’”³ The proponent of an expert’s opinion need not prove to the judge “that the expert’s assessment of the situation is correct.”⁴ Rather, the proponent need only show that “the expert’s conclusion has been arrived at in a scientifically sound and methodologically reliable fashion.”⁵

² *Daubert v. Merrell Dow Pharm.*, 509 U.S. 579, 597 (1993).

³ *Milward v. Acuity Specialty Prods. Group, Inc.*, 639 F.3d 11, 15 (1st Cir. 2011) (quoting *Ruiz-Troche v. Pepsi Cola of P.R. Bottling Co.*, 161 F.3d 77, 85 (1st Cir. 1998)).

⁴ *Milward*, 639 F.3d at 15 (cit. omitted).

⁵ *Id.*

III. ARGUMENT

A. Dr. Herrick is Qualified to Offer Opinions About the Hazards of PCB Exposure and the Reasonableness of Remediating PCB Contamination at Westport Middle School.

Westport's industrial hygiene expert, Robert Herrick, is well qualified to offer expert testimony on the reasonableness of remediating the PCB contamination at Westport Middle School. Dr. Herrick is a Certified Industrial Hygienist who holds a doctorate in Environmental Health Science, who teaches at the Harvard School of Public Health and who has assessed toxic exposures in many contexts and specifically performed research and written published, peer-reviewed articles concerning PCB contamination in buildings where caulk and other building materials contain PCB. *See generally supra* at 2-3. Monsanto attacks Dr. Herrick's qualifications to testify in this case on the ground that he has "no expertise in PCB remediation" and thus allegedly cannot opine as to the reasonableness of Westport's actions following its discovery of PCBs. Dkt. 160 at 4. Monsanto further contends that Dr. Herrick is "simply unqualified to opine as to whether the PCBs in WMS posed any health threat to anyone at any time." *Id.* at 12.

Rule 702 requires only that Dr. Herrick be "qualified as an expert by knowledge, skill, experience, training, or education" to offer his opinions in this case. An industrial hygienist is trained to anticipate, evaluate, prevent, and control a wide range of occupational hazards including toxic exposures.⁶ The two basic tasks Dr. Herrick performs in this case are essential to his professional work: evaluating the hazards presented by a given exposure, and determining what, if anything, should be done to control those hazards.⁷ He holds appropriate qualifications to offer opinions on both issues.⁸

⁶ **Exhibit C** (Barbara A. Plog, "Overview of Industrial Hygiene," in *Fundamentals of Industrial Hygiene* (5th Ed.)(National Safety Council 2002)) at 3.

⁷ *Id.* at 26, 29.

⁸ *See, e.g., Allen v. Martin Surfacing*, 263 F.R.D. 47, 54 (D. Mass. 2009) (holding industrial hygienist qualified to testify about the nature of chemicals used and airborne releases generated by conduct at issue); *see also, e.g., Falcon*

To the extent Monsanto suggests Dr. Herrick requires expertise or training in remediation, Monsanto's attack on Dr. Herrick's qualifications misses the mark. Dkt. 160 at 4-5. Dr. Herrick will not offer opinions about whether the remediation at WMS was correctly carried out or whether the *cost* of remediation was reasonable. *See generally* Ex. B. Rather, Dr. Herrick will testify that given the nature of the contamination at WMS, it was reasonable from a public health perspective to conduct remediation, in view of the health threat that contamination presented. *Id.* at 3. This distinction is consistent with Massachusetts law, which treats the reasonableness of conducting repairs, and the reasonableness of the *cost* of those repairs, as two distinct inquiries.⁹

Even if expertise in conducting environmental remediation would help in assessing the reasonableness of Westport's actions, lack of such specialization would not require this court to exclude Dr. Herrick's opinions. Expert witnesses need not have overly specialized knowledge to offer opinions.¹⁰ An expert's lack of specialty practice in the area about which he or she testifies goes to the weight of the testimony, not its admissibility.¹¹ Indeed, it is an abuse of discretion to exclude testimony that would assist the fact-finder to understand a fact in issue simply because

v. State Farm Lloyds, No. 1:12-CV-491-DAE, 2014 WL 2711849 at *18 (W.D. Tex. June 16, 2014) (**Exhibit D**) (industrial hygienist qualified to testify about hazards of smoke exposure); *In re Welding Fumes Prods. Liab. Litig.*, No. 1:03-CV-17000, 2010 WL 7699456 at *29 (N. D. Ohio June 4, 2010) (**Exhibit E**) (industrial hygienists were qualified to testify that the scientific literature shows manganese is a neurotoxin); *In re Stand 'n Seal Prods. Liab. Litig.*, 623 F. Supp. 2d 1355, 1376 (N.D. Ga. 2009) (industrial hygienist qualified to testify about toxicity of grout sealer); *McCauley v. Nucor Corp.*, No. 1:05-CV-00424-TAB-RLY, 2007 WL 2316463 *6 (S.D. Ind. Aug. 10, 2007) (**Exhibit F**) (industrial hygienist qualified to opine about health and safety effects of chemicals in the workplace); *Magistrini v. One Hour Martinizing Dry Cleaning*, 180 F. Supp. 2d 584, 613 (D. N.J. 2002) (industrial hygienist qualified to testify on issues involving recognition, evaluation and control of health hazards in the workplace).

⁹ *Trinity Church*, 502 N.E.2d at 535-36.

¹⁰ *See, e.g., Diefenbach v. Sheridan Transp.*, 229 F.3d 27, 31 (1st Cir. 2000) (docking expert "well-qualified" to testify though he had never crewed on the specific type of vessel at issue); *Allen*, 263 F.R.D. at 54 (industrial hygienist qualified notwithstanding lack of specific expertise with the chemicals at issue); *Chapman v. Bernard's Inc.*, 167 F. Supp. 2d 406, 421 (D. Mass. 2001) (engineer qualified to testify about daybed design defect based on general engineering expertise).

¹¹ *See Mitchell v. United States*, 141 F.3d 8, 15 (1st Cir. 1998); *see, e.g., Payton v. Abbott Labs*, 780 F.2d 147, 155 (1st Cir. 1985) (holding obstetrician-gynecologists qualified to testify to teratogenic effects of diethylstilbestrol).

the expert does not have the specialization that the court considers most appropriate.¹²

B. Dr. Herrick's Opinions "Fit" this Case and Will Help the Jury.

1. Dr. Herrick's testimony will help the jury decide whether Westport's remediation efforts were "reasonably necessary."

Rule 702 does not require exclusion of Dr. Herrick's opinion about whether the PCB contamination at Westport Elementary School presented enough of a hazard to prompt remediation or removal. As an industrial hygienist who is trained and experienced in how to assess and control the hazards presented by toxic exposures, Dr. Herrick can provide "specialized knowledge" that will help the jury determine the issue of "reasonable necessity." He need not use any magic words to demonstrate "helpfulness" under Rule 702.

Monsanto cannot support its claim that Dr. Herrick's opinions "fall short" of Westport's evidentiary burden on "reasonable necessity" and thus cannot help the jury as Rule 702 requires. Even when Massachusetts law requires expert testimony to prove an element of a claim or defense—for example, proof of causation through "reasonable medical certainty" or proof that a medical professional has violated a professional "standard of care"—the expert witness need not express an opinion in magic words or formulaic phrases.¹³ An expert's opinion will be sufficient proof so long as it is substantially equivalent to the legal phrasing.¹⁴ Here, Monsanto has not cited any Massachusetts authority that requires expert testimony as proof of "reasonable necessity" in a property damage claim, so the argument is even more of a stretch.

Dr. Herrick's proposed opinions are, in fact, substantially equivalent to a determination of "reasonable necessity," and standing alone could constitute sufficient proof for the jury to rely

¹² *Pagés-Ramírez v. Ramírez-González*, 605 F.3d 109, 114 (1st Cir. 2010); *Gaydar v. Sociedad Instituto Gineco-Quirurgico y Planificacion Fam.*, 345 F.3d 15, 24–25 (1st Cir. 2003).

¹³ See *Bailey v. Cataldo Ambulance Serv., Inc.*, 832 N.E.2d 12, 17-18 (Mass. App. 2005) (collecting authorities on expert testimony regarding causation and standard of care in medical malpractice cases); *Stewart's Case*, 910 N.E.2d 937, 938 (Mass. App. 2009) (expert opinion expressed in terms substantially equivalent to those of worker's compensation statute will suffice).

¹⁴ *Stewart's Case*, 910 N.E.2d at 938.

upon in finding “reasonable necessity” for the remediation Westport conducted. Dr. Herrick will testify that Westport “was reasonable in its decision to take actions to remove or otherwise remediate PCB contamination at Westport Middle School in order to provide maximum protection for those inside the school building with the expectation that under no circumstance would exposure to children of air levels above 300 ng/m³ be permissible.” Ex. B at 3. Further, he will testify that Westport was “entirely reasonable in deciding to remove or otherwise remediate sources of PCB contamination from Westport Middle School” because “PCBs in schools pose a health threat to those inside, particularly to children,” and “PCBs are wide-spread contaminants, and removal and proper disposal of PCB-containing materials prevents further environmental contamination, reducing the public health threat of PCB exposure.” *Id.* To the extent Monsanto believes these opinions fall short of demonstrating “reasonable necessity,” it can and should raise the issue through cross-examination of Dr. Herrick before the jury.

In addition, Monsanto claims Dr. Herrick’s testimony will “confuse” the jury or supplant this Court’s instruction on the law, but even a cursory review of Dr. Herrick’s report reveals that Dr. Herrick in no way “instruct[s] the jury as to applicable principles of law,” contradicts governing law, provides “an opinion as to a disputed issue of law,” or suggests “what the law **should** require.” Dkt. 160 at 6-7. Comparison to the authorities Monsanto cites quickly demonstrates the irrelevance of this argument to Dr. Herrick’s opinions. In *Nieves-Villanueva v. Soto-Rivera*,¹⁵ the court excluded testimony by an expert who expounded in great detail on the interpretation of court opinions and applications of the law to the facts of the case. 133 F.3d at 99. In *Adams v. New Eng. Scaffolding, Inc.*,¹⁶ this Court excluded an engineer’s testimony on OSHA regulations to the extent that the expert sought to “state his conclusions concerning the

¹⁵ 133 F.3d 92 (1st Cir. 1997).

¹⁶ Civil Action No. 13-12629-FDS, 2015 WL 9412518 at *9 (D. Mass. Dec. 22, 2015).

legal elements of plaintiff's negligence claim.” 2015 WL 9412518 at *9. And in *In re Welding Fume Prods. Liab. Litig.*,¹⁷ the court excluded the opinions of a “business ethics” expert who offered opinions that the court thought would confuse the issues, such as that a “[a] corporation should do more than comply with applicable laws and regulations.” 2005 WL 1868046 at *19. Dr. Herrick’s opinions in no way encroach on the court’s role or threaten to confuse the jury in this manner.

2. Controlling Massachusetts authority does not require a property damage plaintiff to prove contamination with a toxic substance at a level known to cause human health effects.

As with Westport’s toxicology expert, Dr. James Olson, Monsanto seeks to render Dr. Herrick’s opinions irrelevant by establishing a new, higher, standard of proof for property damage claimants who complain of PCB contamination. *See* Dkt. 160 at 8, 10. As briefed more extensively in section III.A.1 of Westport’s Response to Defendants’ Motion to Exclude the Expert Opinions of James R. Olson, Ph.D., controlling authority from the Massachusetts Supreme Court holds that contamination with a hazardous substance—in and of itself—constitutes “physical damage” to property that can support a property damage claim,¹⁸ and no requirement exists that Westport must demonstrate that the contamination found at the school was sufficient to cause personal injury.¹⁹ Indeed, even in a personal injury case, Monsanto’s argument would fail under controlling Massachusetts law, because exposures at WMS *below the level shown to cause disease* could support a product liability claim, so long as the school

¹⁷ No. 1:03-CV-17000, 2005 WL 1868046 (N.D. Ohio Aug. 8, 2005).

¹⁸ *See Guaranty–First Trust Co. v. Tectron, Inc.*, 622 N.E.2d 597, 599 (Mass. 1993) (holding Bank suffered a recoverable economic loss directly resulting from physical damage to its real property that had been contaminated with hazardous material); *McDonough v. Whalen*, 313 N.E.2d 435, 440 (Mass. 1974) (holding that plaintiffs suffered “physical damage” to property in the form of sewage flowing over land); *Garweth Corp. v. Boston Edison Co.*, 613 N.E.2d 92, 95 (Mass. 1993) (holding that business owner claiming economic loss due to oil spill did not suffer compensable injury because “none of the released oil contaminated or damaged any tangible or real property” owned by the plaintiff).

¹⁹ Although Monsanto argues that the “jury will be asked to determine whether PCB made the WMS unsafe,” Dkt. 160 at 9, this is would be an erroneous jury question or instruction under *Trinity Church*. *See* 502 N.E.2d at 536.

exposure—in conjunction with the plaintiff’s other environmental exposures—is a “substantial factor” in causing the plaintiff’s injury.²⁰

Dr. Herrick’s opinions will assist the jury regardless of whether they are sufficient to establish that the pre-remediation exposure levels at WMS would have caused human health effects, or occurred via the same exposure levels and pathways as in the literature documenting those health effects.²¹ For example, Dr. Herrick can explain what levels of PCB exposure are currently considered unduly hazardous for a school environment, based on EPA Guidelines, and why industrial hygienists would recognize those types of exposures as a hazard that requires control. He can also explain, based on his training and experience as an industrial hygienist and his own published, peer-reviewed research, how PCBs contained in caulk could give rise to exposures to children, staff, and visitors in the school, and how those exposures fit into the lifetime exposure to PCBs that students, staff, and visitors will receive as a result of ubiquitous PCB contamination of the environment. Accordingly, his testimony satisfies the relevance requirement of Rule 702.

²⁰ See, e.g., *Payton v. Abbott Labs*, 780 F.2d 147, 157 (1st Cir. 1985) (holding that under Massachusetts law, where it was impossible to separate the effect of doses of a drug from two different sources, defendant could be liable for the dose it contributed); *Morin v. AutoZone Ne., Inc.*, 943 N.E.2d 495, 499 (Mass. App. 2011) (recognizing that where a toxic substance causes latent disease, “[t]o raise a triable issue of a sufficient exposure and of a substantial contributing role, the plaintiff need not produce evidence of ‘but for’ causation on the part of the targeted product, but only of its contribution to causation of the resulting injury.”); see also Mass. Super. Ct. Civ. Prac. Jury Instr. § 11.2.9(b) (“If two or more causes operating together contributed to the plaintiff’s injury so that, in effect, the damages suffered were inseparable, then it is enough for the plaintiff to prove that the defendant’s negligence was a substantial contributing factor in causing the injury. By ‘substantial’ I mean that the defendant’s contribution to the harmful result, i.e., the defendant’s negligence, was not an insignificant factor. The defendant’s negligence must contribute along with other factors to the result; it must be a material and important ingredient in causing the harm.”).

²¹ Monsanto does not articulate what “pathways” it contends are not linked to the underlying scientific data on PCBs health effects or why, from a scientific standpoint, no information about the systemic effects of PCBs can be determined from such exposures. Dr. Herrick will opine that PCBs at WMS had the potential to enter the body through multiple pathways, including inhalation, ingestion, and absorption through the skin. Ex. B at 10.

C. Dr. Herrick's Opinions Meet the Reliability Criteria of Rule 702.

1. Rule 702 does not require that Dr. Herrick's opinion on "reasonableness" be a scientific statement capable of verification pursuant to the scientific method.

Dr. Herrick has explained that the reasonableness judgment he makes for this case is “at that border between science and judgment and policy.”²² His goal from a public health standpoint is to “render decisions and judgments that are based upon some level of scientific certainty, and that is what anchors it in this criteria of being reasonable.” *Id.* That such judgments about reasonableness cannot be scientifically verified does not render them inadmissible as expert testimony, as Monsanto contends. Dkt. 160 at 3. It is well-recognized that the different factors articulated by the court in *Daubert*—including whether the theory or technique at issue can be tested²³—are not all equally applicable to each type of expert testimony.²⁴ Monsanto's position—that an expert may never offer reliable testimony expressing professional judgments, because judgments cannot be scientifically verified—would deprive juries in environmental remediation cases such as this one of the substantial benefit of (among other things) the expertise and education of public health experts whose professional mission, grounded in science and medicine, is to promote and protect the health of people and communities.

Fortunately, Rule 702 does not impose a requirement that limits experts to expressing only those opinions that are subject to objective verification. Where the opponent of the testimony challenges the factual basis for an opinion, the court must examine “whether the testimony has ‘a reliable basis’ in light of the knowledge and experience of the relevant

²² **Exhibit G** (Dep. of Robert Herrick) at 108:5-21.

²³ *Daubert*, 509 U.S. at 597.

²⁴ *See, e.g., United States v. Mooney*, 315 F.3d 54, 62 (1st Cir. 2002) (explaining that the *Daubert* factors “are not definitive or exhaustive, and the trial judge enjoys broad latitude to use other factors to evaluate reliability.”).

discipline.”²⁵ The “critical inquiry is whether the expert ‘employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.’”²⁶

In this case, Dr. Herrick has fully explained the relevant information and considerations that lead him to conclude—based on measurements of PCB levels at Westport Elementary School, the currently-known properties and health effects of PCBs, and the guidelines published by EPA for the prevention of health hazards at schools where PCBs are present—that Westport acted reasonably in taking steps to remediate PCB contamination at the Westport Middle School. A review of his peer-reviewed publications demonstrates that his opinions in this case were developed with the same degree of intellectual rigor he uses in his work outside the context of litigation. Indeed, Dr. Herrick has repeatedly subjected his analysis and views about the health threats posed by the presence of PCB-containing building materials in schools to the scrutiny and criticism of other scientists:

- In 2004, Dr. Herrick published an investigation of PCB exposures resulting from the use of PCB-containing building materials, concluding that “caulking should be routinely analyzed for PCBs and contaminated materials managed appropriately to reduce the potentially significant health hazards resulting from PCB exposure.”²⁷
- In 2007, Dr. Herrick published a study of PCB contamination in soil around buildings constructed with PCB-containing caulk, concluding that the results demonstrated the need for a national survey of PCBs in building materials and surrounding soil.²⁸ He further warned that “[t]he practice of disposing of old PCB caulking removed during building renovations in conventional landfills should be reconsidered, given the apparent mobility of PCBs from the caulking material,” since disposal in landfills could lead to additional environmental contamination. *Id.*
- In 2010, Dr. Herrick published a policy analysis regarding PCB contamination in schools, arguing that “[t]he only reasonable course to protect teachers, staff, and students from

²⁵ *In re Neurontin Mktg., Sales Practices, & Prod. Liab. Litig.*, 612 F. Supp. 2d 116, 131 (D. Mass. 2009) (cit. omitted).

²⁶ *Id.* (quoting *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 152 (1999)).

²⁷ **Exhibit H** (Herrick RF, et al., “An Unrecognized Source of PCB Contamination in Schools and Other Buildings,” *Environ Health Perspect.* 112(10):1051-1053 (2004)) at 3.

²⁸ **Exhibit I** (Herrick RF, et al., “Soil Contamination from PCB-Containing Buildings,” *Environ Health Perspect.* 115(2):173-175 (2007)) at 2.

what the EPA acknowledges is a source of concern is to provide federal financial support for PCB testing and removal.”²⁹

Dr. Herrick’s ability to link his reasonableness judgment to the underlying scientific evidence and governmental public health recommendations, based on his education and training as an industrial hygienist, distinguishes Dr. Herrick’s opinions from those at issue in *Calisi v. Abbott Laboratories, Inc.*³⁰ In *Calisi*, this court excluded testimony from a warnings expert who used **no methodology other than experience** and who could not explain how he used that expertise to conclude that pharmaceutical product labels were “misleading” and “confusing.” 2013 WL 5441355 at *10. By contrast, Dr. Herrick does not rely solely on “experience,” but is a well-qualified public health professional whose education, training, and research activities have equipped him to identify hazardous toxic exposures and make judgments about what, if anything, should be done to control them, and whose report lays out in detail the rationale for his conclusions.

2. Dr. Herrick offers reliable opinions evaluating the hazards of PCBs exposure at Westport Middle School.

Dr. Herrick’s opinions on the hazards presented by PCB exposure are *not* offered in this case to establish medical causation but rather, to answer a related question that the jury must decide: based on the current state of knowledge about exposure to PCBs, and how they behave in the environment and when used in construction materials, was it reasonably necessary to remediate the PCB contamination at Westport Middle School? Dr. Herrick’s report provides ample documentation that he had a reliable basis in the medical and scientific literature for

²⁹ **Exhibit J** (Herrick RF, “PCBs in school-persistent chemicals, persistent problems.” *New Solutions* 20(1):115- 126 (2010)) at 123.

³⁰ No. 11-10671-DJC, 2013 WL 5441355 (D. Mass. Sept. 27, 2013).

identifying the specific hazards presented by PCBs used in building materials,³¹ and for arriving at the opinion that the PCB contamination at Westport's school required remediation. To explain the rationale for his opinions, Dr. Herrick must reasonably explain his identification of PCBs as a health hazard—should his explanation threaten to become overly “cumulative” of trial testimony by Westport's toxicology expert James R. Olson, Ph.D., the Court can easily manage the trial presentation by ruling on appropriate objections during his testimony.

Monsanto argues, however, that the court should exclude Dr. Herrick's testimony about the hazards of PCB exposure because it rests on faulty methodology. Specifically, Monsanto contends Dr. Herrick has offered a “one-sided” analysis and that he allegedly “failed to consider” contrary evidence—likening Dr. Herrick to experts in two cases who used a “weight of the evidence” analyses to arrive at opinions on general and specific causation in personal injury cases. In *Milward v. Rust-Oleum Corp.*,³² the court excluded the testimony of an expert who gave opinions on specific causation using a “weight of the evidence” methodology but “expressly disavowed her intent, and minimized her ability, to analyze conflicting epidemiological studies.” 820 F.3d at 473. In *Norris v. Baxter Healthcare Corp.*,³³ the court excluded specific causation opinions based on a differential diagnosis that was “flatly contrary to *all* of the available epidemiological evidence,” 397 F.3d at 885, noting that after the defendants proffered “a significant body of epidemiology” evidence tending to disprove causation, *id.* at 881, the experts had “ignored or discounted [that evidence] without explanation.” *Id.* at 886.

³¹ Monsanto's ridiculous accusations of “plagiarism” go to the weight of Dr. Herrick's testimony, rather than to its admissibility. Dr. Herrick followed appropriate citation practices by citing the source for his statements, and *he himself helped write* the “advocacy” document discussed in Monsanto's brief. *See* Ex. G at 203:20-204:6.

³² 820 F.3d 469 (1st Cir. 2016).

³³ 397 F.3d 878 (10th Cir. 2005).

Dr. Herrick's analysis, by contrast to the testimony excluded in *Milward* and *Norris*, is not offered as proof of medical causation.³⁴ Dr. Herrick uses the standard methodology of industrial hygiene. Identifying the health hazards of an exposure, based on the published medical and scientific literature, and the recommendations and findings of entities such as EPA, ATSDR, and the International Agency for Research on Cancer, is a fundamental step in the basic methodology followed by all industrial hygienists in evaluating environmental and occupational health threats.³⁵ In identifying the specific hazards created by exposure to PCBs at the Westport Middle School, Dr. Herrick relies upon the same types of underlying data that he does in his work as an industrial scientist and public health researcher outside the litigation context.³⁶ A further indication of reliability is that Dr. Herrick's opinions regarding the health effects of PCBs and the hazards of exposure resulting from the use of PCB-containing building materials were not developed for purposes of litigation, but are an outgrowth of his scientific research activities and reflect the same views he has published in the peer-reviewed literature.³⁷

Monsanto cites the absence of scientific studies specifically demonstrating that PCBs in buildings cause health problems, or that PCBs at the levels found in the WMS cause health problems, as evidence that Dr. Herrick's opinions lack any reliable foundation. Dkt. 160 at 9. The lack of these findings is not probative of anything—no such studies have ever been

³⁴ In determining admissibility under Rule 702, "scientific validity for one purpose is not necessarily scientific validity for other, unrelated purposes." *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 591 (1993); *see also*, *e.g.*, *Alves v. Mazda Motor of Am., Inc.*, 448 F. Supp. 2d 285, 288 (D. Mass. 2006) (recognizing that an expert's methodology may be admissible for some purposes but not others).

³⁵ *See* Ex. C at 26 ("Determining whether a health hazard exists is based on a combination of observation, interviews, and measurement of the levels of the energy or air contaminants . . . The industrial hygienist then compares environmental measurements with hygienic guides, TLVs, OSHA PELs, NIOSH RELs, or reports in the literature.").

³⁶ *Compare, e.g.*, Ex. B at 17 (citing Agency for Toxic Substances and Disease Registry, *Toxicological Profile for Polychlorinated Biphenyls (PCBs)* (2000) and US EPA classification of PCBs as a "probable human carcinogen" as basis for identifying them as a human health hazard); *and* Ex. C at 1 (same).

³⁷ *See, e.g.*, Ex. C ("There is clear evidence that PCBs cause cancer in animals, and they are considered probable human carcinogens [U.S. Environmental Protection Agency (EPA)1996]. Human and animal data provide evidence that PCBs have significant toxic effects, including effects on the immune system, the reproductive system, the nervous system, and the endocrine system.").

performed.³⁸ Monsanto offers no evidence that an industrial hygienist (or any other scientist) would rely upon the absence of such evidence to conclude that no health hazard exists, in the face of the available studies and guidelines Dr. Herrick cites that *do* demonstrate the existence of a hazard. Further, Dr. Herrick's report thoroughly documents how—in part through research he himself performed and published—the use of PCBs in building materials such as caulk has been confirmed to result in the release of PCBs that can be inhaled, ingested, and absorbed through the skin of a building's occupants, and also released into the surrounding environment through soil contamination.

CONCLUSION

Westport's designated expert witness Robert Herrick is an eminent expert in industrial hygiene who has previously published peer-reviewed research in which he studied the same issues about which he proposes to testify here, giving similar opinions. His opinions fall squarely within the realm of his qualifications and competencies as an industrial hygienist and will help the jury to decide a key fact at issue—whether it was reasonably necessary to remediate the PCB contamination found at Westport Middle School. Because Dr. Herrick's testimony meets the standards required by Federal Rule of Evidence 702, the Court should deny Defendants' Motion to Exclude the Testimony of Robert Herrick.

Dated: December 22, 2016

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³⁸ Ex. G at 151:17-152:13.

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CERTIFICATE OF SERVICE

I, Brett Land, do hereby certify that a copy of the foregoing was served upon the following counsel of record via the ECF system on this 22nd day of December, 2016.

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